

Work Order ID 59643

Wednesday, June 09, 2010 9:47:04 AM

Page 1

Item ID: D3488-042

Accept

Revision ID:

Item Name: Blade Fitting Assembly, RH

Start Date: 6/9/2010 Start Qty: 12.00

Required Date: 6/24/2010 Req'd Qty: 12.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date: 10-6-09 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3488

Rev B

100

0.00



DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Dwg DSK 101 & Folio FA627□2-Debur

SL 10/06/28

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

SL 10/06/28

120

HAAS CNC VERTICAL MACHINING #1

0.00



HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA627 & Dwg D3488□2-Debur

SL 10.7.1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59643

Wednesday, June 09, 2010 9:47:04 AM

Page 2

Item ID: D3488-042

Accept

Revision ID:

Setup Start

Item Name: Blade Fitting Assembly, RH

Stop

Start Date: 6/9/2010 Start Qty: 12.00

Required Date: 6/24/2010 Req'd Qty: 12.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

10-7-1

12

Quality Control

140

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

10/07/01

12

Quality Control

150

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

12 BL 10-7-6

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59643

Wednesday, June 09, 2010 9:47:04 AM



Page 3

Item ID: D3488-042

Accept



Setup Start



Revision ID:

Item Name: Blade Fitting Assembly, RH

Stop



Start Date: 6/9/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 6/24/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M 11/4/841

Memo

0.00

START TIME:

10:20

FINISH TIME:

OVEN TEMPERATURE:

10:30

12

BR 10-7-8

170



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

8 1067108

112

180



HandFinish

Hand Finishing

HandFinishing

0.00

Memo

0.00

Install Inserts as per Dwg D3488

M 10 07 22 12

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____








NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			




NOTE: Date & initial all entries

Work Order ID 59643

Wednesday, June 09, 2010 9:47:04 AM

Page 4

Item ID:	D3488-042	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Blade Fitting Assembly, RH					
Start Date:	6/9/2010	Start Qty:	12.00		Cust Item ID:	
Required Date:	6/24/2010	Req'd Qty:	12.00		Customer:	
Reference:						
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start
	QC:	Date:	SPC (Y/N):	Date:		Stop
						
						

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
200  Packaging Packaging	Identify as per dwg & Stock Location Memo	0.00 0.00							
210  QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

5 10/07/22

(12)

91 10/07/25

X(2)

10/07/28

11/27/28

(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, June 09, 2010 9:47:08 AM

Page 1

Work Order ID: 59643

Parent Item: D3488-042

Parent Item Name: Blade Fitting Assembly, RH

Comments: IPP Rev:A New Issue 06-02-28 JLM
IPP Rev:B As per Rev B 06-03-30 JLM
IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Start Date: 6/9/2010

Required Date: 6/24/2010

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
ALS7-1032-225		Purchased	No				Each	799.0000	4	48			



INSERT

B# 110768

Location

Loc Qty

Loc Code

ST282

799

100896

100

102018

99

111529

300

111581

300

ml 10.07-22

D6103-003

Manufactured No

Each

31.0000

1

12



Round Billet, Aluminum

Location

Loc Qty

Loc Code

MAT43

31

42281

1

55430

30

12 10/06/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	59643
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2	Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.155	✓			
Ø2.780	+/-0.005	2.777	✓			
Ø3.125	+/-0.010	3.123	✓			
Ø3.346	+/-0.010	3.346	✓			
0.125 x 45°	+/-0.010 x +/-0.1°	0.125 x 45°	✓			
8.000	+0.030/-0.000	8.016	✓			
9.250	+/-0.010	9.249	✓			
0.188	+/-0.010	.188	✓			
R0.032	+/-0.010	-.032	✓			
R0.062	+/-0.010	-.062	✓			
Ø0.297	+0.005/-0.001	-.301	✓			
Ø0.430	+/-0.010	.435	✓			
0.100	+/-0.010	.101	✓			
0.125	+/-0.010	.130	✓			
2.620	+/-0.010	2.611	✓			
3.500	+/-0.010	3.499	✓			
1.005	+/-0.010	1.005	✓			
Ø0.484	+0.005/-0.001	.485	✓			
1.180	+/-0.010	1.180	✓			
3.150	+/-0.010	3.150	✓			
3.070	+/-0.010	3.069	✓			
R0.063	+/-0.010	-.063	✓			

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	59643
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2	

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	.508				
0.750	+/-0.010	.750				
1.500	+/-0.010	1.497				
11.18	+/-0.030	11.184				
R0.062	+/-0.010	2.062				
0.125	+/-0.010	.130				
0.590	+/-0.010	.591				
0.793	+/-0.010	.800				
1.351	+/-0.010	1.344				
1.317	+/-0.010	1.322				
1.802	+/-0.010	1.804				

Measured by: JL / JLP	Audited by: SV	Prototype Approval:	N/A
Date: 10/06/01	Date: 10/07/01	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

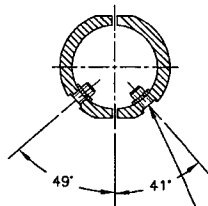
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

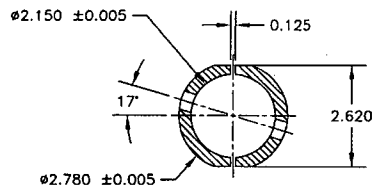
NOTE: Date & initial all entries

SHOP COPY
 RETURN TO
 DRAWING ROOM
 UNCONTROLLED
 SUBJECT TO CHANGE
 WITHOUT NOTICE
 WORK ORDER NO. 59043
BS10-6-09



SECTION B-B

Ø0.297
 C BORE Ø0.430 x 0.100
 INSTALL ALS4-1032-225 (OR AKS4-1032-225
 OR ALS7-1032-225 OR AKS7-1032-225)
 INSERTS AFTER FINISH
 (4 PLACES)



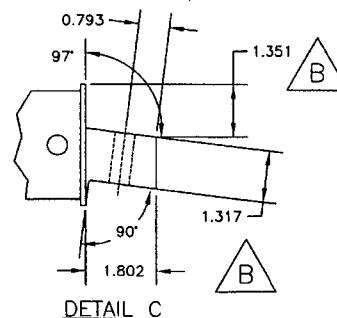
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

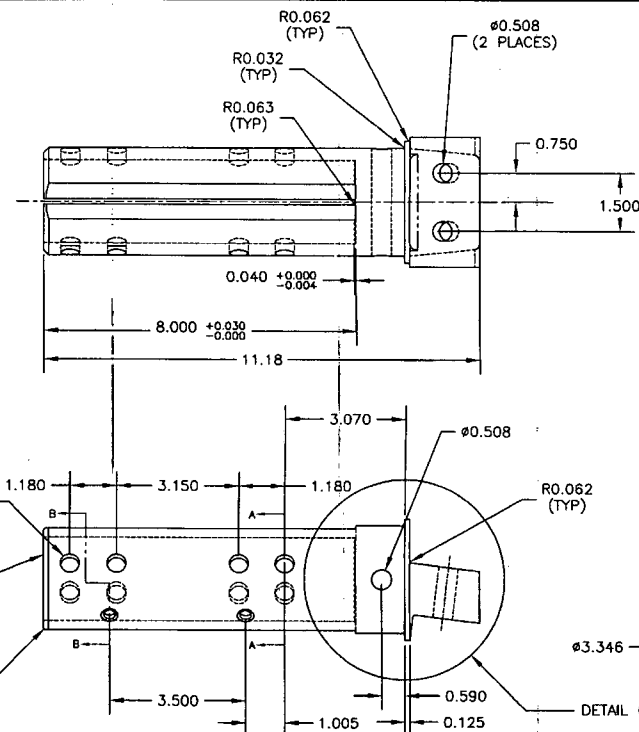
QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR
PER QQ-A-225/9
(REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DETAIL C



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
 06.03.15 PH
 PER OS
 E/N #734

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 OR COPIED OR COMMUNICATED TO ANY OTHER
 PERSON WITHOUT WRITTEN PERMISSION FROM
 DART AEROSPACE USA, INC.

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED PH
DATE	06.03.15	TITLE
		BLADE FITTING
		DART AEROSPACE USA, INC. PORT HADLOCK, WA
		REV. B SHEET 1 OF 1 SCALE 1:3

762

-243

1161

1030

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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